



## **Linking tourism and academe: Developing the potential of Isabela State University as the first academic ecotourism campus in the Philippines**

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### **ABSTRACT**

The study assessed the status of Isabela State University in meeting the required criteria set by the national agencies in relation to standard requirements, in operating an eco-tourism site in the Philippines. Descriptive method of research was utilized to come up with the result. A total of 455 respondents, consisting of four groups, were asked to rate the degree of importance of the cultural dimensions observed pertinent to the academic ecotourism status of ISU based on two standards. Results revealed a rating of “Very Highly Compliant” according to the natural system in both standards used as benchmarks. The rest of the areas were rated as “Highly Compliant”. Corollary to this, several issues and concerns were raised by the various groups of respondents in meeting the challenges to being successful academic ecotourism camps, specifically in the areas of natural and cultural area focus; protection and management of the environment, culture, and indigenous knowledge and practices; education and ethics; visitor satisfaction and responsible marketing. However, the top concern raised was the availability of funds to finance the physical developments and other initiatives for the sustainability of the project. Anent to these concerns, a framework for academic ecotourism campus was proposed capitalizing on the vast underutilized resources of the institution, as well as its strong collaborative linkages and competent and capable human resource to augment the existing inventory considering the environmental, economic productivity, and socio-cultural impacts of becoming an educational venue about biodiversity, the ecosystem, and mother earth.

**Keywords:** Linking Tourism, developing, ecotourism.

### **INTRODUCTION**

Tourism is a multifaceted driven industry. It is a big business and will persist to be full of promise. The multiplier- effect of tourism has prompted investments and created new business and employment opportunities cutting across a wide variety of sectors, which demand knowledgeable and highly skilled workers. It really suggests that it is likely to continue to grow and develop much more rapidly and more dynamically than many other sectors for many years to come. Furthermore, according to the United Nation’s World Tourism Organization Highlights, tourism is considered one of the fastest emerging sectors in the world which demonstrates phenomenal growth and diversification. It has found its potential as a driver of economic growth, contributing trillions of dollars annually to the global economy, creating employment and wealth, and stimulating capital investment. It is a highly dynamic and competitive industry that requires the aptitude to always keep track of the latest trends in tourism products and development, as well as, the changing customer profiles, and adjust accordingly (Cortum, 2015). The brisk changes are now advancing through the development of knowledge and skills acquired. Consequently, many different forms of tourism activities and products have been developed and increased in demand. Debates on the definition of such brought several types, including agritourism and ecotourism (Guzman, 2017).

Ecotourism is “a form of sustainable tourism within natural and cultural heritage areas where community participation, protection and management of natural resources, culture and indigenous knowledge and practices, environmental education and ethics, as well as economic benefits are fostered” and pursued the enrichment of host communities and satisfaction of visitors (Fernandez, 2010). The main concept of ecotourism is responsible travel to natural areas that conserves the environment and sustains the well-being of local people. From the tourists’ viewpoint, ecotourism is typically the gratification provided by a unique experience in an undisturbed natural environment, viewing flora, fauna, birds, animals, landforms, scenery, and natural beauty (Blanza, 2012). In connection with this, The Isabela State University (ISU) at Cagan is one of the core campuses of the University system that is strategically located along the foothills of the Northern Sierra Madre with proximity to other areas declared as protected areas including the Penablanca Protected Landscape and Seascape (PPLS), Northern Sierra Madre Natural Park (NSMNP), Quirino Protected Landscape (QPL) and many others. This chain of biodiversity hotspots, prior to their declaration as protected areas, is a national initiative to protect their biological integrity participated by academe, government, and non-government organizations.

Furthermore, the Isabela State University – Cabagan Campus has 254 hectares which contained Academic Core, Student and Staff Housing, Experimental Stations, Industrial Tree Farms, Agro-Forestry Farms, Arboretum, Wildlife Sanctuary, Pasture, Lagoon/ Fishpond Waterway, Orchard Plantation, Legumes, Cereals, Roadway Mall, Athletic and Recreation, And Community Center Services. This existing land use mobilized the Students, Faculty, Administrator, and other staff to establish and develop a nature-friendly and true farm experience within the campus (Guiyab, Ponce, & Paddayuman, 2018).

In view of this fact, this campus, which was formerly known as Cabagan Farm School became known for its Motto of “University for People and Nature.” Living up to its motto, Dr. Ambrose Hans G. Aggabao, the Campus Executive Director, wanted that more development projects to be undertaken and to work together toward academic ecotourism on campus.

It is hoped that the university’s operation of IGEs featuring the best practices in the field, as well as, the application of mature technologies, will be able to affect the development of a new breed of graduates – well trained, skilled, and with a distinctive quality apart from the rest, entrepreneurial. The IGEs will be crafted to be counted with, and support the trilogy functions of instruction, research and extension, and training. Expectedly, these enterprises will redound to the benefit of the internal, as well as the external clientele of ISU and collectively to the province and the whole country in general (Teguh, 2011).

Over the last few decades, there has been a significant increase in student movement across countries for the purpose of education. In this regard, greater student mobility in higher education has been particularly important. Because this type of student mobility has its own distinct characteristics, it is possible to classify it as a new form of tourism (Rodriguez, Martinez-Roget, & Pawlowska, 2012). This new type of tourism, dubbed "academic tourism," is defined as "any stays in higher education institutions in places outside their usual environment for a period of less than one year, with the primary goal of completing degree-level studies in universities and/or attending language courses organized by universities." As a result, there is a distinction between domestic academic tourism (moving to study within the country) and international academic tourism (if the move is abroad). Universities are increasingly interested in understanding and tracking their total social and environmental impacts in order to improve long-term institutional sustainability. This interest in campus sustainability necessitated the development of strategies to: (1) understand the institution's environmental aspects in a changing regulatory landscape; (2) manage financial risks posed by volatile and rising energy prices and operational costs; and (3) establish and maintain a positive public reputation for social responsibility. The emphasis on university sustainability may serve as a model for behaviors and policies that affect other sectors of society (Beyer, 2014).

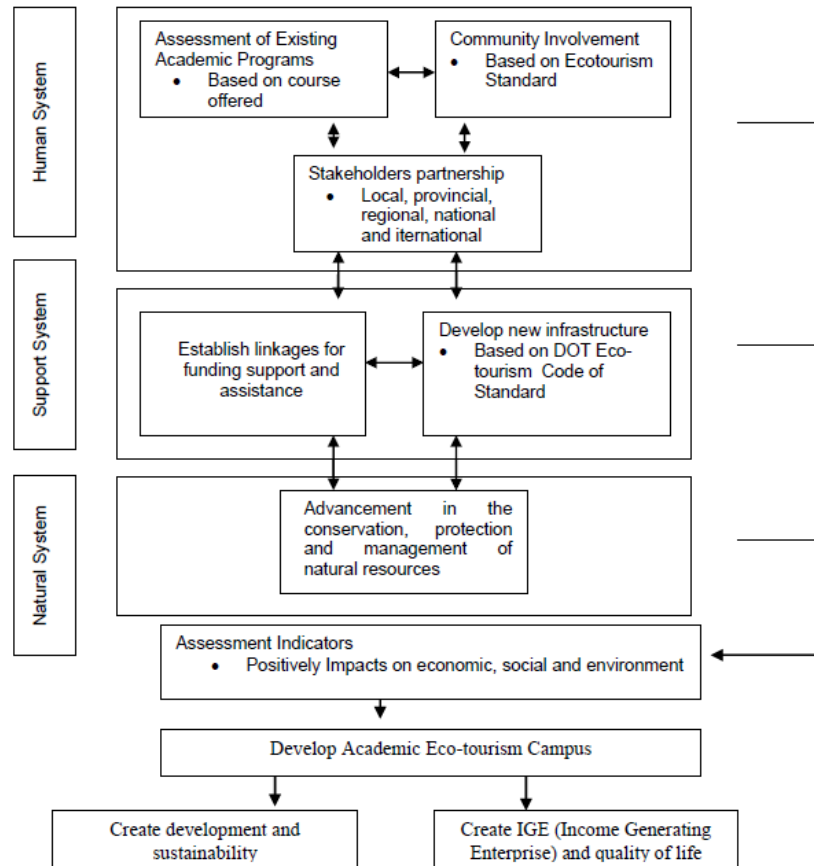
The difficulty is that on-campus sustainability efforts generally take the shape of programs targeting at specific issues, such as recycling, alternate modes of transportation, or support for local food producers, with no cross-campus coordination. Instead, financial expansion is frequently used as the main technique for coping with these issues in institutional policies and practices. Change initiatives based on a systems view of higher education are regarded to be critical in meeting the crucial and pressing challenge of campus sustainability) (Posner, S.M. and Stuart, R., 2013).

As it embarks on a new path, Isabela State University (ISU) faces a completely different and far more difficult future. ISU, like other state colleges and universities (SUCs), is continuing to struggle financially as the government becomes more critical of SUC budgets. For the past twelve years or more, SUCs have been denied money for capital expenditures, despite the government's increasing pressure and desire for quality, as represented in normative financing requirements (Tariella, 2014). The government is determined to consolidate public higher education institutions in the direction of the regional merger as the funding formula grows more stringent. These circumstances are putting a lot of strain on ISU's management and leadership. The University's greatest challenge currently is to widen its scope, consolidate an efficient use of resources, and strategic resources investment that can assure its long-term resource sustainability.

The study was conducted specifically at Isabela State University mainly Cabagan Campus. Academic ecotourism campus does not only provide new employment opportunities to the rural community and supplementary revenue, but it will increase the value of conservation of the environment and value of agri- or farm activity experience.

## **B. METHOD**

The conceptual framework is anchored on the idea of Bossel (1999) and Lektauers et al. (2010) in relation to the purpose of developing an academic ecotourism campus.



Source: Compiled from Bossel(1999)and Lektuers et al. (2010).(Modified)

**Figure 1: Conceptual Framework**

Figure 3 shows the conceptual model in which the six systems interact, namely the academic programs, community involvement, stakeholders' partnership, funding support and assistance, infrastructure, conservation, protection, and management of the natural resources. The human system consists of academic programs, community involvement, and stakeholders' partnership. The academic programs provide individuality development, which is determined by community involvement and stakeholders' partnership capability to deliver services. Correspondingly, the human system would have developed only if the support system and natural system contribute completely. The support system is resolute through the establishment or extension of funding support and assistance and the intensity of infrastructure development based on the DOT Code of Standard (Villepontoux, 2014). The infrastructure development also depends on the profitable actions of the university, which finally supply the need for the human system and natural system.

The natural system attained advancement in the conservation, protection, and management of natural resources, to which the support system contributes totally. The complete systems of human, support, and nature provide impact by assessing indicators on the economic, social, and environment which can develop an academic ecotourism campus that will create growth and sustainability, income-generating enterprise (IGE), and quality of life for the people. It also explains the relationships and interactions among the subsystems, orienteer, and indicators to achieve sustainable development. Likewise, it will be supported by the DOT ecotourism standard, which aims to assist sustainable economic development by offering education and building the capacities of people as this will be the base to develop appropriate training packages for the target group.

This study employed the mixed method of research. According to Cortum (2015), a mixed-methods approach is one in which the researcher tends to base knowledge claims on pragmatic grounds. It employs strategies of inquiry that involve collecting data either simultaneously or sequentially to best understand the research problem. The data collection also involves gathering both the instruments and interviews which will represent both the quantitative and qualitative information (Wang, Ling-en, 2014).

This research design was considered appropriate in this particular case in as much as this study attempted to determine the potential of Isabela State University for its development as the 1st sustainable academic ecotourism campus not only in the region but also in the Philippines.

**Respondents of the Study and Sampling Technique**

There was a total of 455 respondents in this study composed of students, faculty members, administrators, community leaders and residents, local officials, tourism officers, and foreign tourists. From within the Campus and other schools, in the Province of Isabela. The respondents were randomly selected from among the participants in a regional summit organized and hosted by the institution (ISU) during the summer of 2017.

**Table 1: Breakdown of Respondents of the Study**

Classification/Nature	Frequency (f)	Percentage (%)
Student	338	74.0
Government Employee	81	18.0
Private Employee	21	5.0
Others	15	3.0
<b>Total</b>	<b>455</b>	<b>100.0</b>

Based on their classification or nature of career, the respondents are broken down into students, government employees, private employees, and others (i.e., businessmen, visitors/tourists) as could be seen in Table 1. Since it was a regional Summit of LGU officers, an extremely high percentage (74%) of the respondents were students who were likewise SK Officers and members.

**Profile of the Respondents**

The biggest portion of the respondents were students (n = 338, 74%) while the rest of the samples were government employees (n = 81, 18%), private employees (n = 21, 5%), and business owners/other professionals (n = 4, 3.0%). In terms of position/title, the majority were barangay officials (n = 213, 47%). Since most of the respondents were students, (n = 380, 84%) were single while (n = 68, 15%) were married. They were relatively young between the ages of 18 to 27 (n = 285, 63%). With regards to educational attainment, the majority were college undergraduates (n = 273, 60%); 19% were college graduates while 8% have postgraduate units or postgraduate degrees. Respondents were equally distributed in terms of gender at (n = 162, 36%) male and (n = 167, 37%) female. In terms of years of service, half (n = 232, 51%) of the respondents had no answer and about a third (n = 141, 31%) had 0-5 years of service in their current workplace. On the other, the rest had been in Respondents were dominantly local tourists (n = 292, 64%) and only (n = 9, 2%) were foreign tourists.

**Data Gathering Procedure**

A letter of permission was forwarded to the office of the Executive Director, Isabela State University, Cagayan prior to the conduct of the survey. Upon approval, the researcher personally administered the survey questionnaire. For the issues and concerns, the respondents were asked to answer open-ended questions where respondents were asked to write the issues and concerns that they considered as challenges and/or problems that could hinder ISU’s quest in becoming an academic eco-tourism campus. This was supplemented with an unstructured interview after the actual survey. All responses were gathered, tabulated, and presented in appropriate tables and matrices. Upon retrieval of the accomplished questionnaire, the data were tallied, computer-processed, analyzed, and interpreted.

**Instrumentation**

A researcher-constructed questionnaire checklist was used as the main tool to gather the needed data. According to Best (2001), one advantage of using a questionnaire is that the researcher can administer it herself, and in the process, can establish rapport with the respondents, at the same time explaining some items which the respondents may find vague. Prior to distribution, the questionnaire checklist underwent content validation by experts in the field and was revised to its final form based on the comments and suggestions of the valuator.

**Statistical Treatment of Data**

Profile variables were presented using descriptive statistics specifically frequency and percentages, whereas weighted mean, was used for the level of importance and the corresponding degree of compliance to the DOT Code of Eco-tourism Standards, as well as, the three (3) systems clustered as Human, Support, and Natural. The weighted means were subjected to statistical analysis using One Way Analysis of Variance (ANOVA) to determine whether significant differences existed between and among the respondent’s ratings on the level of significance at 5% level of significance and subsequently to Scheffe Test for differences in means.

**C. RESULTS AND DISCUSSION**

The Isabela State University at Cabagan is a higher education institution whose critical role is to provide quality education designed to prepare people to meet the demands of our rural development. The establishment of a state university in this part of the Cagayan Valley region dates to early 1916, when the Isabela Farm School opened on the elementary level and was later converted into Cabagan, Rural High School, who lasted until 1937. Following World War II, its operation was reverted to the elementary level under the name Cabagan Farm School, and it persisted until 1950, when Cabagan High School was finally opened in response to popular demand for the re-establishment of a high school in the area. It was supported financially by the Isabela provincial government until 1958, when it was converted into the Cabagan National Agricultural School by virtue of the Republic Act. No.1989. Secondary agriculture and secondary homemaking curricula are available for both boys and girls. The Cagayan Valley Institute of Technology was founded as a forerunner to what would become a state college (CVIT).

**Eco-tourism Profile of Isabela State University in terms of Support System**

ISU's support system could be seen in the success of various programs, projects, and activities resulting from its strong collaborative linkages with several partners, both private and government entities. From 2016 until 2017 ISU collaborated with 9 partners in the following areas: World Food Program (WFP) for Disaster preparedness and response; CHED and OWWA for scholars' Stipend; DENR(Protected Areas & Wildlife Bureau or PWAS) for the Biodiversity Partnership Project and production of Quality Materials/Cloned Seedlings of Indigenous/Premium Forest Tree Species; DOST Region 2 for the establishment of product development and training Center; DA-BAR for Regional Climate-resilient Agri-fisheries International Center for Tropical agriculture; One- Town-One Product (OTOP) for Sustainable fruit Wine Production and Commercialization and Enhancing Mango Productivity thru Integrated Crop Management, Postharvest Management, and Double Crop Propagation; Thuenen Institute of International Forestry and Forest Economics (TIWF) located in Hamburg, Germany for Landscape Forestry in the Tropics (LaForet); and DACVRC, Ilagan for the financial assistance for the procurement of one unit tractor.

The Sports complex has a grandstand with a total floor area of 180.00 sq. m and can accommodate five hundred spectators while the oval is 400 m long with 8 lanes. In front of the grandstand are the two volleyball courts and a basketball court in between the two volleyball courts. Under the grandstand is the office of the campus ROTC and NSTP Coordinator (Buaron, 2011).

For the advancement in the conservation, protection, and management of natural resources the following are the existing profile of Isabela State University in terms of the Natural System. Composed of 10.00 hectares where trees, shrubs, and herbaceous plants are grown for people to look for scientific and educational purposes (Crotts et. Al., 2011). So far, Isabela State University has recorded more than two hundred native and exotic plants.

Owing to the diversity of its flora and fauna, Garita Campus has been declared a wildlife sanctuary and has an area of 5.00 hectares. Today, Garita Height is teeming with more than two hundred beautiful woody flora that shelter a dizzying array of reptiles, insects, and birds. In fact, the campus has become host to mountain birds from the Northern Sierra Madre Range, such as pompadour green pigeon (Theron Pompadora), and Luzon hornbill (Phenolopodes panini), black-naped monarch (Hypothymus azurea), and pygmy woodpecker (Dendrocarpus maculatus), among other migratory birds (Driscoll, 2011).

Pasture is composed of 50.00 hectares of land covered with grass and other low plants suitable for grazing animals, especially cattle or sheep. Lagoon, fishpond, and waterway composed of 18.19 hectares that is stocked with fish and is used in aquaculture for fish farming or are used for recreational fishing or for ornamental purposes.

Orchard plantation, which is composed of 15.00 hectares, features large gardens, which serve aesthetic, as well as productive purposes. Intentional planting of trees or shrubs comprising fruit-or nut-producing trees is grown for commercial production or for food production. For biodiversity assessment, standard taxonomic classification tables and biodiversity indices are being used as an intervention (Loreno, 2011).

The wood library and herbarium situated in ISU, Cabagan Campus provides a collection of a wide variety of floral and faunal species and wood found in the Northern Sierra Madre Natural Park. The wood library and herbarium have been used for both the academic research and instructional needs of the region.

**Table 2: Academic Ecotourism Status of ISU in terms of Natural/Cultural Area Focus**

Particulars	Students		Private Employees		Government Employees		Others		AWM	VD
	WM	VD	WM	VD	WM	VD	WM	VD		
1. Ecotour facilities allowed each visitor to spend more time with nature or culture.	4.4	VHC	4.0	HC	4.2	HC	4.5	VH C	4.3	VHC
2. Visitors are given opportunity to directly experience nature.	4.6	VHC	4.2	HC	4.5	VHC	4.0	HC	4.3	VHC
3. Facilities are built to enhance natural environment and monitor visitor movement or activity.	4.3	VHC	4.3	HC	4.5	VHC	4.0	HC	4.3	VHC
Sub mean	4.4	VHC	4.2	HC	4.4	VHC	4.2	HC	4.3	VHC

Legend: 4.21-5.00=Very Highly Compliant (VHC); 3.41-4.20=Highly Compliant (HC); 2.61-3.40=Moderately Compliant (MC); 1.81-2.60=Slightly Compliant (SC); 1.00-1.80=Not Compliant (NC)

Table 2 shows the academic ecotourism status of ISU in terms of natural and cultural area focus. Students and government employees rated natural and cultural area focus as very highly compliant (m = 4.2) whereas, private employees and other groups rated it as highly compliant (m = 4.0). This could be because students and government employees were more aware of the efforts of ISU towards becoming an eco-tourism campus compared to the other groups who were more concerned with their individual initiatives. However, the sub means for this area were still very highly compliant.

**Table 3: Academic Ecotourism Status of ISU in terms of Community Participation**

Particulars	Students		Private Employees		Government Employees		Others		AWM	VD
	WM	VD	WM	VD	WM	VD	WM	VD		
1. Consultation or regular meeting is undertaken to inform and produce inputs from local residents on the development or operation of the activity. In the case of indigenous people, prior informed consultation is conducted.	4.2	HC	4.4	VHC	4.2	HC	4.4	VHC	4.3	VHC
2. Community group is formed or organized to assist in the sustainable management of resources	4.6	VHC	4.4	VHC	4.3	VHC	4.0	HC	4.3	VHC
Sub mean	4.4	VHC	4.4	VHC	4.2	HC	4.2	HC	4.3	VHC

Legend: 4.21-5.00=Very Highly Compliant (VHC); 3.41-4.20=Highly Compliant (HC); 2.61-3.40=Moderately Compliant (MC); 1.81-2.60=Slightly Compliant (SC); 1.00-1.80= Not Compliant (NC)

In terms of community participation, students and private employees rated this area as very highly compliant (m = 4.4), while government employees and others gave a rating of highly compliant (m = 4.2) with a sub mean of 4.3 described as very highly compliant. In as much as ISU has several linkages both locally and internationally, the local's participation in activities and projects pertinent to eco-tourism is maximized.

The academic eco-tourism status of ISU was rated for its environmental sustainability in terms of seven (7) dimensions, namely: location, environmental planning, and impact assessment, site disturbance, construction materials and methods visual impact, light and water supply, and conservation. show that all seven dimensions had Average Weighted Mean (AWM) ratings ranging from 4.10-4.20 described as HIGHLY COMPLIANT with Site Disturbance and Construction Materials and Methods obtaining slightly higher ratings (AWM=4.20) over the other five (5) dimensions (m = 4.10).

There were five (5) dimensions that were included in Education and ethics, namely: access to interpretation, the accuracy of the information, interpretive planning, awareness and understanding, and staff training. Findings revealed that two (3) out of the five (5) dimensions got Average Weighted Means of 4.3 described as very highly compliant. These were Awareness and Understanding (m = 4.5, the highest-rated dimension) and interpretive Planning (m = 4.3). Staff Training and access to Interpretation obtained similarly ratings of 4.2 described as highly compliant while Accuracy of Information got the lowest AWM of 4.1 but was still described as highly compliant.

**Table 4: Academic Ecotourism Status of ISU in terms of Visitor Management**

Particulars	Students		Private Employees		Government Employees		Others		AWM	VD
	WM	VD	WM	VD	WM	VD	WM	VD		
1. Adequate rest stations or sites are provided.	4.2	HC	4.6	VHC	4.3	VHC	4.8	VHC	4.5	VHC
2. Public toilets are used wherever possible. Where there are no public toilets, human wastes are buried in a hole at least 15 cm deep and at least 100 meters away from water bodies or campsites.	4.3	VHC	4.4	VHC	4.4	VHC	4.8	VHC	4.5	VHC
3. Comfort rooms are clean and provided with basic amenities such as soap, tissue paper, etc.	4.1	HC	4.3	VHC	4.2	HC	4.4	VHC	4.2	HC
4. Informal feedback is maintained through any of the following and used the information for product enhancement.	4.1	HC	4.3	VHC	4.3	VHC	4.4	VHC	4.3	VHC
5. Visitors observation.	4.1	HC	4.4	VHC	4.2	HC	4.4	VHC	4.3	VHC
6. Discussion with visitors.	4.3	VHC	4.8	VHC	4.3	VHC	3.8	HC	4.3	VHC
7. Visitor feedback forms.	4.3	VHC	4.2	HC	4.2	HC	3.6	HC	4.1	HC
8. Regular staff meetings/ debriefings.	4.2	HC	4.3	VHC	4.3	VHC	2.3	SC	3.8	HC
Sub mean	4.2	HC	4.4	VHC	4.3	VHC	4.1	HC	4.2	HC

Legend: 4.21-5.00=Very Highly Compliant (VHC); 3.41-4.20=Highly Compliant (HC); 2.61-3.40=Moderately Compliant (MC); 1.81-2.60=Slightly Compliant (SC); 1.00-1.80= Not Compliant (NC)

Visitors are the heart of any eco-tourism entity. Their satisfaction is of primordial importance for the sustainability of the endeavor. Of the eight (8) dimensions which were assessed by the four (4) groups of respondents in terms of visitor management, the highest-rated was the provision of adequate rest stations or sites and the availability of public toilets (AWM=4.5 described as very highly compliant) while the lowest-rated

Regular Staff Meetings/Debriefings (AWM= 3.8) and Visitor feedback forms (AWM=4.1). Informal feedback maintained through visitors’ observation and discussion likewise obtained AWM=4.3 described as very highly compliant.

Both the eco-tourism status of ISU in terms of responsible marketing and contribution to conservation and preservation areas obtained AWM of 4.2 described as highly compliant. In particular, the highest-rated indicator was about (AWM=4.3) appropriate practices and behavior are outlined and (AWM=4.3) visitor litter/rubbish is removed under Responsible Marketing and Contribution to Conservation and Preservation, respectively. All other items in these areas obtained ratings described as highly compliant.

In table 5, the four (4) groups of respondents were asked to rate the importance of the DOT standards in creating a useful quality standard for the academic eco-tourism campus of ISU based on a five-point Likert scale with 5 as the highest with a descriptive index of very highly compliant interpreted as 75%-100% of cultural dimensions observed and 1 as the lowest with a descriptive index of not compliant interpreted as none of the cultural dimension was observed. Findings showed that students, most respondents, rated six (6) out of the eight (8) DOT standards as very highly compliant to level up the academic ecotourism status of ISU. The six (6) standards are as follows: natural or cultural areas, community participation, which obtained the highest ratings of 4.4; education and ethics, local benefits, responsible marketing, and contribution to conservation and preservation, all with similar ratings of 4.3. On the other hand, the two (2) standards which got the lowest ratings of 4.2 described as highly compliant were visitor satisfaction and protection and management of the environment, culture, and Indigenous knowledge and practices.

**Table 5: Overall Academic Eco-Tourism Status of ISU based on the DOT’s Code of Standards**

DOT Standards	Students		Government Employees		Private Employees		Others		Ave WM	VD
	WM	VD	WM	VD	WM	VD	WM	VD		
1.Natural or cultural areas focus	4.4	VHC	4.4	VHC	4.2	HC	4.2	HC	4.3	VHC
2.Community Participation	4.4	VHC	4.25	VHC	4.4	VHC	4.2	HC	4.3	VHC
3.Protection and Management of Environment, Culture & Indigenous Knowledge and Practices	4.2	HC	4.3	VHC	4.1	HC	3.8	HC	4.1	HC
4.Education and Ethics	4.3	VHC	4.2	HC	4.2	HC	4.2	HC	4.2	HC
5.Local Benefits	4.3	VHC	3.9	HC	4.1	HC	3.9	HC	4.0	HC
6.Visitor Satisfaction	4.2	HC	4.3	VHC	4.4	VHC	4.1	HC	4.2	HC
7.Responsible Marketing	4.3	VHC	4.2	HC	4.4	VHC	4.0	HC	4.2	HC
8.Contribution to Conservation Preservation	4.3	VHC	4.3	VHC	4.2	HC	4.1	HC	4.2	HC
Over-all Mean	4.3	VHC	4.15	HC	4.2	HC	4.1	HC	4.2	HC

Legend: 4.21-5.00=Very Highly Compliant (VHC); 3.41-4.20=Highly Compliant (HC); 2.61-3.40=Moderately Compliant(MC); 1.81-2.60- Slightly Compliant (SC); 1.00-1.80= Not Compliant (NC)

Government employees likewise rated DOT standards 1 (Natural or cultural areas focus: WM=4.4) and 8 (contribution to conservation and preservation; WM=4.3) as VERY HIGHLY COMPLIANT (VHC). The two (2) other standards which got VHC ratings were #3 (protection and management of the environment, culture, and Indigenous knowledge and practices; WM=4.3) and # 6 (visitor satisfaction; WM=4.3). The lowest rated standard by government employees was # 5 (local benefits; WM=3.9). The perspective of private employees was different as their highest-rated DOT standards were # 1 (community participation; WM=4.4); # 6 (visitor satisfaction; WM=4.4) and #6 (responsible marketing; WM=4.4) all with descriptive indexes of VHC. The last group composed of business owners, out-of-school youths, and other professionals rated all the DOT standards as only HIGHLY COMPLIANT with WM ranging from 3.8 (standard # 3: protection and management of the environment, culture, and Indigenous knowledge and practices) to 4.2. (Standard s # 1: natural or cultural areas focus; 2: community participation; and 4: education and ethics). Students’ overall mean for the 8 DOT standards was 4.3 described as VHC, whereas the other three (3) groups of respondents’ overall means ranged from 4.1 to 4.2 described as HC. However, with regards to the average WMs of the individual DOT standards as rated by the four (4) groups, only #1 (natural or cultural areas focus) and #2 (community participation) got similar ratings of 4.3 with a verbal description of VHC. The other six (6) standards obtained similar average ratings described as Highly Compliant.



**Table 6: Test for Significant Difference between and among the Ratings of the Respondents based on DOT Code of Standards**

SV	df	MS	F-ratio	F tabular		Interpretation	Decision
				.05	.01		
Between Group	3	0.073	4.05	2.95	4.57	Significant @ .05 alpha	Reject Ho
Within Group	28	0.018					

*P < .05, significant at .05 alpha*

ANOVA results revealed the existence of a significant difference between and among the ratings of the four (4) groups of participants with regards to the academic eco-tourism status of ISU based on the DOT Code of Standards. Pair-wise comparison of means showed the existence of a significant difference only between the perception of the students and others (business owners and Out of School Youths) with regards to the importance of converting ISU into an eco-tourism campus. All the other groups agreed on ISU’s potential as the first academic ecotourism campus in the Philippines based on the DOT Code of Standards.

**Table 7: Comparative Academic Eco-tourism Status of ISU**

Dimensions	Based on DOT Standards		Based on the Clusters		AWM	VD
	WM	VD	WM	VD		
Human System	4.15	HC	4.19	HC	4.17	HC
Support System	4.20	HC	4.18	HC	4.19	HC
Natural System	4.13	HC	4.21	VHC	4.165	HC
Over-all Mean	4.16	HC	4.19	HC	4.175	HC

*Legend: 4.21-5.00=Very Highly Compliant (VHC); 3.41-4.20=Highly Compliant (HC); 2.61-3.40=Moderately Compliant (MC); 1.81-2.60- Slightly Compliant (SC); 1.00-1.80= Not Compliant (NC)*

Comparatively speaking, however, the academic eco-tourism status of ISU based on DOT Standards and the Clusters, show similar trends with all areas or clusters except one obtaining AWMs described as highly compliant. Results revealed the very highly compliant accorded natural system in ISU’s quest to become the 1st Academic Eco- tourism Campus in the Philippines.

**Table 8: Test for Significant Difference between the Academic Ecotourism The campus of ISU based on the DOT Standards and the Clusters**

t value computed	t value tabular @.05 alpha	Interpretation	Decision
19.61	12.71	Significant	Reject Ho

The t-test for independent means was employed to determine whether the ratings obtained regarding the academic eco-tourism status of ISU based on the two (2) standards (i.e. DOT and Clusters) were significantly different or not and the results are presented in Table 24. Results of the t-test revealed that a significant difference existed between the academic eco-tourism status of ISU when grouped according to the DOT standards and the three clusters. Most probably the differences would be in terms of the degree of importance attached to each cluster as all results tended to show that for an academic eco-tourism campus to be successful, priority should be given to the natural system and how the community views its impact on their lives and economic productivity.

### C. CONCLUSION AND RECOMMENDATION

Based on the findings of the study the following conclusions could be derived that the proposed land use of ISU’s vast land area is a manifestation of its commitment to harnessing to the fullest its potential as an educational venue about biodiversity and nature. Sustaining the local and national initiatives undertaken by the academe, government, and non-government organizations to protect the chain of biodiversity and other areas along the environs of ISU declared as protected landscape and seascape will help ensure ISU’s quest to become the first academic ecotourism campus in the Philippines. In creating a useful quality standard for ISU as an academic ecotourism campus, priority is given to the preservation and conservation of the natural system and its impact on the lives and economic productivity of the community. An analysis of opportunities and constraints reveals ISU has great potential to become the premier academic ecotourism campus in the Philippines.

The following Proposed Strategic Framework for Isabela State University as the first academic ecotourism campus in the Philippines and the proposed IGE based on the Expanded Land Use Area that has the three (3)

clusters well covered in compliance with the DOT Code of Standards are hereby recommended to help ensure the successful conversion of ISU as a premier academic ecotourism campus in the Philippines.

#### REFERENCES

1. Beyer, M. (2014). *Tourism Planning and Cooperation: A handbook*. Bonn, Germany: Deutsche Gesellschaft für internationale Zusammenarbeit (GIZ)
2. Blanza, M.G., (2012). *Ecotourism Development Plan for Dueñas, Iloilo*. Master's Thesis Presented to CIBIBE, Philippine Women's University. Taft Manila.
3. Buaron, F.G.C., (2011) *Pristine Richness of Lambunao, Land of Waterfalls*. A Dissertation Presented to Graduate School, West Visayas State University, Lambunao campus, Lambunao, Iloilo.
4. Cortum, R., (2015). *Ecotourism in the Philippines*. Presented to NES Seminar at Mandawe City, Cebu, Philippines.
5. Crotts, J., et Al., (2011). *Introduction; Global Alliances in Tourism and Hospitality Management*. The Haworth Press, Inc.
6. Driscoll, L. (2011). *The Importance of Ecotourism as a development and Conservation Tool in the Osa Peninsula, Costa Rica*. Center for Responsible Travel (CREST)
7. Fernandez, L. (2010) *The UP Newsletter - (Vol XXXI Issue 08) UPV Marine Biological Station: UPV-IPO*.
8. Guiyab M.V., Ponce, H., Paddayuman R. (2018). *Native Woody Flora of the Isabela State University Wildlife Sanctuary*
9. Guzman, L., Taggug J. (2017). *Avian Diversity in the Isabela State University Cabagan Wildlife Sanctuary*
10. Posner, S.M. and Stuart, R. (2013), "Understanding and advancing campus sustainability using a systems framework", *International Journal of Sustainability in Higher Education*, Vol. 14 No. 3, pp. 264-277. <https://doi.org/10.1108/IJSHE-08-2011-0055>
11. Loreno, L. (2011). *West Visayas State University: a narrative data Presentation*. A Dissertation Presented to Graduate School, West Visayas State University, Lambunao campus, Lambunao, Iloilo.
12. Rodriguez, E., Martinez-Roget F., Rodriguez, Xose A. *Academic Tourism; A More Sustainable Tourism*. Vol 13-2 (2013).
13. Tariella, F. (2014). *Rural Tourism and Community Development*. Manila Bulletin-Online. <http://www.mb.com.ph/ruraltourismandcommunitydebelopment/#P1upitP4QfaCbmY9.99.,1-29-2016>
14. Teguh, F. (2011). *Indonesian Policy in Supporting Sustainable Tourism and Developing Ecotourism Destination*. Presented in the United Nations Conference on Trade and Development, 20 July, 2011
15. Villepontoux, S., (2014). *Ecotourism, concept and reality. What are perspectives?*. Hal Id; hal-00834646. <https://hal.archives-ouvertes.fr/hal-00834646v1/12-14-2915>
16. Wang, Ling-en, etal. (2014) *Ecotourism Environmental Protection Measures and Their Effects on protected Areas in China*. [www.mdpi.com/journal/sustainability](http://www.mdpi.com/journal/sustainability). ISSN 2071-1050, 2-1-16.